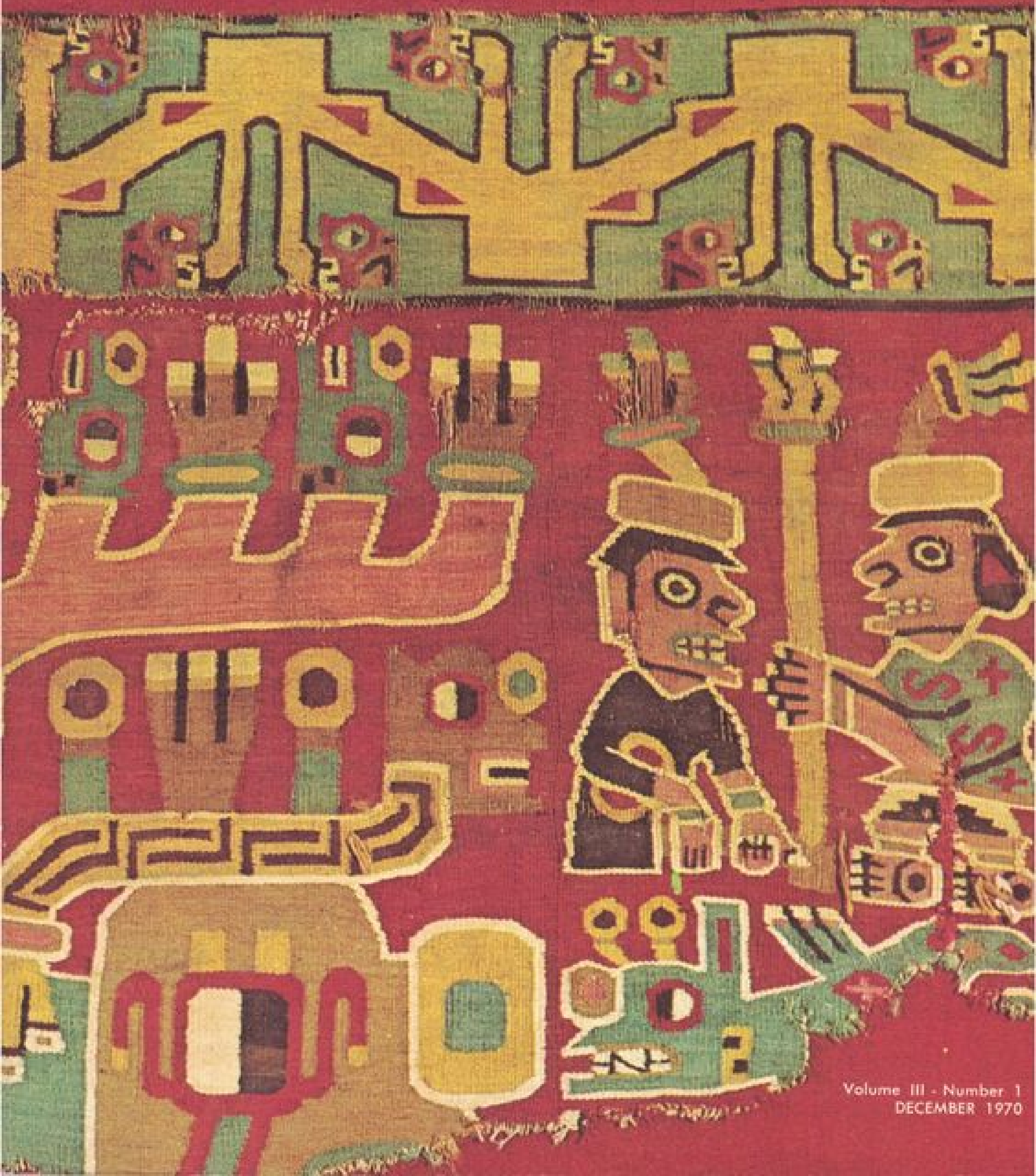
TEXTILE MUSEUM JOURNAL



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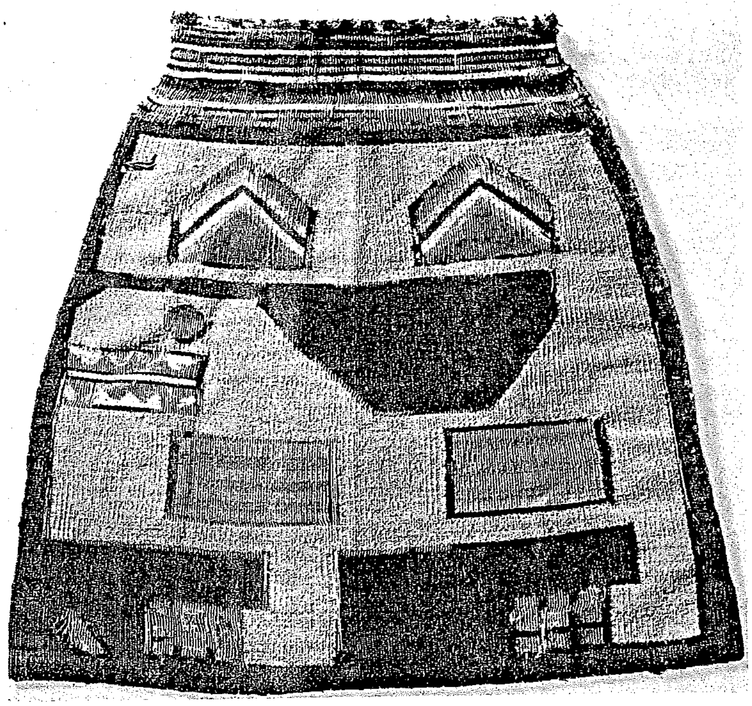

Fig. 1 *Tapestry bag, a tubular product seamed at the bottom. Length, 36.5 cm. Bottom width, 40.7 cm. Top width, 21 cm. Warp:* V/)) *plied* / *, two tone, brown and white cotton. Weft:* ∧ *alpaca? Count: 17 x 60 per inch. Colors: yellow, blue, red, light olive, brownish black. Arthur Bullowa Collection.*

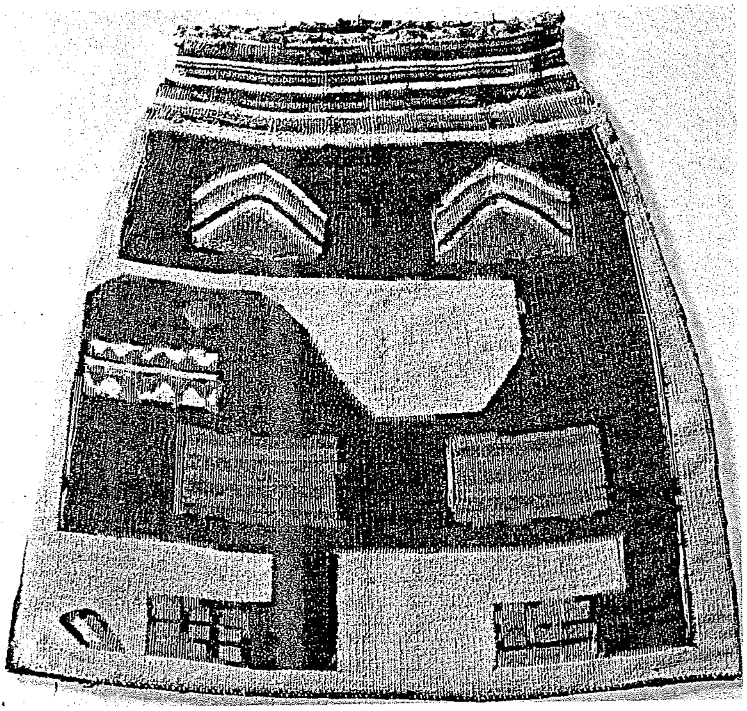

Fig. 2 *Reverse of Fig. 1*

SHAPED TAPESTRY BAGS
FROM THE NAZCA-ICA AREA OF PERU

JUNIUS B. BIRD

The following comments are based on an examination of three Peruvian tapestry bags presumably made during the latter part of the Nazca cultural sequence. One is the property of Mr. Arthur Bullowa of New York; two are in the Textile Museum Collection. A few others are known but all are without precise locality data and all lack information on the ceramics which must have been associated with them.

As a group they are characterized by similarity of form or outline, by the use of virtually the same colors, and by large bold motifs. They are noteworthy because of the procedures used to achieve the overall outline: a relatively narrow mouth, wide, slightly curved or straight base and curved sides. In each case the procedure differed, suggesting that they were not a standardized product and that each weaver was experimenting to obtain a common objective. None has been described in detail in any discussion of Peruvian loom products woven to other than square or rectangular forms.

As is well known, the Peruvians, like other native American weavers, did not tailor their garments but assembled or created them from square or rectangular fabrics woven to the specific sizes needed. Examples of Peruvian fabrics that have been cut to adapt them to some special purpose are extremely rare.

Some relief from the limitations imposed by using only squared fabrics was achieved by shaping fabrics during weaving. Various procedures or systems were used to accomplish this, the more simple being variation of weft tension. Nearly all handweavers when first learning to weave have difficulty in creating straight, parallel side selvages, for any variation in weft tension affects the edge. If there is too much tension the fabric width will decrease so handweavers normally strive to maintain uniform weft tension and to create straight, even edges. Some of the prehistoric Peruvians, however, exploited the effect of varied tension to modify deliberately the form of the final product. Fabrics so shaped are readily recognized for their maximum widths are at the ends and they narrow progressively toward the middle or any desired section of the warp length.

In other cases shaping was accomplished by fanning out the warp between two parallel bars or by setting the bars so they were not parallel to produce side selvages of differing length. Some items seemingly were made by using curved loom bars and some undoubtedly had a third bar to expand or extend the warps at their centers where the fabric width would be greatest.

Almost all of these systems result in modification of the warp-weft counts in different areas of the same fabric. If the differences are extreme there will be a corresponding modification of the nature of the cloth so in some instances warps were regionally added or eliminated as weaving progressed.

To date no comprehensive review of this rather intriguing aspect of Peruvian weaving has been made, and this article does not propose to be one. The bags with which we are concerned are, in contrast with other Peruvian bags, relatively large. In a sense they are articles of costume for there were no pockets in contemporary garments. If we can judge from historic practice, they were probably carried by men and might have held coca leaves. However, there is no record of what these particular bags contained when found.

The most obvious feature which distinguished the bag shown in Figures 1 and 2 from the Textile Museum specimens, is that the only sewn seam is across the bottom. Before the seam was closed the finished fabric somewhat resembled a funnel with curving rather than conical profile.

The production of such a fabric must have been rather complex. Some details of construction can be established by study of the specimen, others must be deduced. It is certain that weaving started at the base of the bag; that there was nowhere any side selvage and that at irregularly located points adjacent warps were brought together, woven as a pair for a short distance, then one of the pair was cut off and eliminated. In a number of places the cut end of the warp yarn shows between the wefts on the outer surface of the bag. This suggests that the warps were first cut some distance beyond the advancing edge of the weft and were cut flush with the surface only after the weft was all in place.

The tapestry wefts dovetail about the warps located on the vertical lines of color change. Along diagonal breaks in color, slits up to an eighth of an inch in length may occur as the colors shift in successive steps.

In creating regularly dovetailed tapestry the different weft yarns are used in succession, weaving from selvage to selvage. In a tubular product with no side selvages, the direction of weaving must be reversed at some point in each weft row. In this particular bag only dissection could establish what was done, but as there is a color shift along the

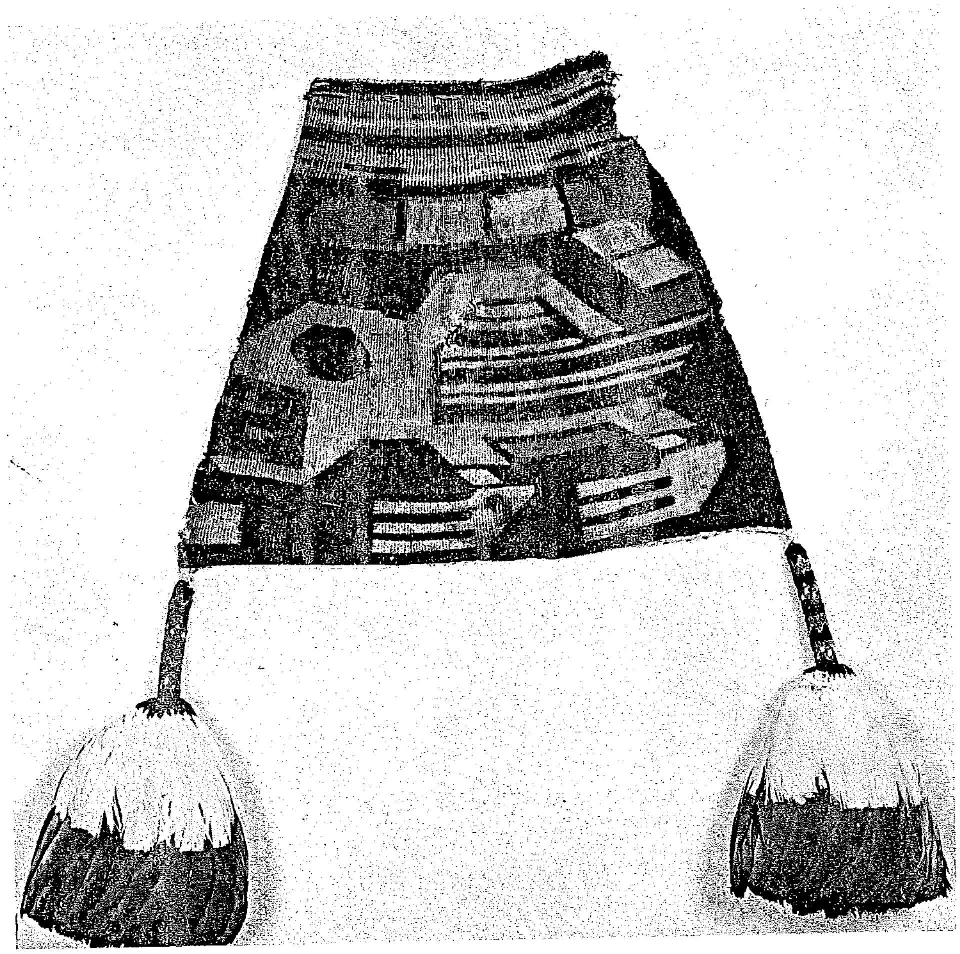

Fig. 3 *Tapestry bag, woven in one piece, folded and sewn up sides. The opposite side of the bag has an unidentifiable geometric motif. Length, 24.5 cm. Bottom width, 30.5 cm. Top width, 15 cm. Warp: /3\ cotton. Weft: /\ alpaca? Count at bottom: 16 x approx. 114 per inch. Colors: yellow, blue, light tan, rose, pink, purple, dark brown. Textile Museum 91.148*

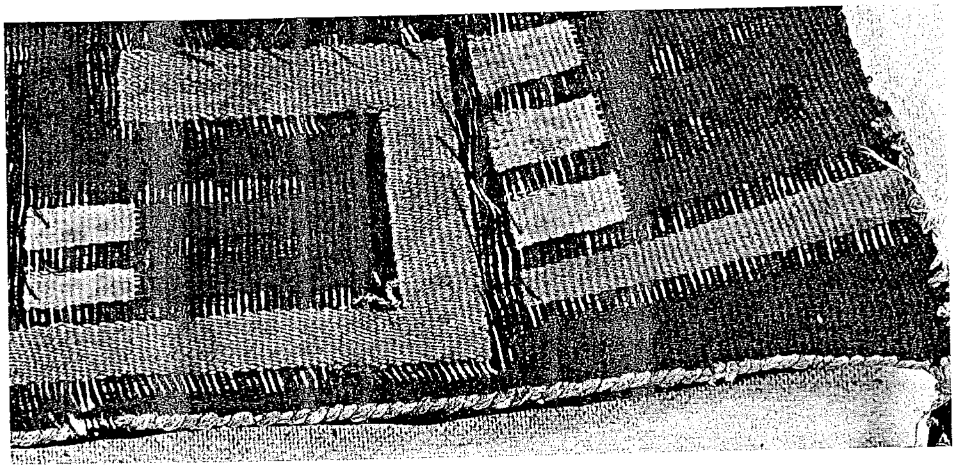

Fig. 4 *Detail of opposite side of the bag illustrated in Fig. 3 showing the row of twining at the bottom of the bag.*

evenly dovetailed sides, the weft direction probably changed at each side.

Perhaps the most difficult question to answer is how the warps were set up and controlled. There is a rather heavy heading cord in the turns of the warp at the bag bottom. A small section is missing at one corner, but from this break the cord continues across the width of the warp, turns at the opposite corner, and returns to the point where part is missing. We cannot tell from the specimen if the two ends were originally tied, overlapped, or if they extended beyond the corner. Conceivably the cord might have been made as an endless loop in the same way one forms a rope ring from a single strand. In any case, the warp turns are evenly spaced along it so that once attached to a loom bar there were actually two sets of warp, one behind the other. Each presumably had its own heddle and shed rod controls.

The other end of the warp must have been secured to, or sustained by, another loom bar, the turns grouped closer together. This last is suggested by the fact that below the point where the first of the warps were cut and eliminated, the warps expand sufficiently to give the lower portion of the bag its form.

The operation of such a double loom would pose no particular problem when used with a backstrap support. The whole could easily be turned over to continue the orderly insertion of weft without any visible break or variation at the edges.

American backstrap loom operators frequently weave from both ends of their looms. They will weave a small portion of the warp next to one loom bar, then reverse the position of the shed rod in relation to the heddle, turn the loom around and start again at the other bar. This puts the area of terminal construction within the body of the fabric where the final weft insertion with a needle may perhaps be easier. By having a small woven section at the end away from the weaver, the warps are secure. If one breaks, the adjacent warp, a continuation of the same yarn, will not come loose. In this bag, with numerous warp yarns deliberately cut and eliminated, there had to be some provision made in advance to maintain tension on all warps. It is reasonable to suppose that this was accomplished by following the common practice and that a section was woven next to the loom bar beyond the area to be filled with tapestry.

We have not attempted more than a sampling of warp counts across the specimen, all on the side where the animal figure is in a blue field. (Fig. 1). Here we find a total of 277 warps across the bag bottom. As the opposite side is indistinguishable in construction it must have had a comparable number, although it is probably an even figure, in order to keep the warp-weft sequence regular. At the lower line of the bag neck there are 153 warps; at the mouth, 149. Thus when weaving terminated, approximately 46 per cent of the warp strands had been eliminated. Up to the bottom line of the angular dots in the animal tail only 13 per cent of the warps had been cut, so the greatest reduction, as one would assume from the bag outline, is above this point.

The slight curvature of the bottom edge is, I believe, a normal result of the tension created during construction. As a check, a diagram was prepared based on the bag outline with the lower corner angles projected from a straight line tangent to the bottom curve. The plotted side lines should represent the original alignment of the edge warps as they lay when stretched between loom bars. The distance from these lines to the upper corners of the bag totals just 46 per cent of the span between the lines, equal to the reduction by warp elimination. From this we can conclude that there was no measurable reduction in fabric width by increasing weft tension and that the bottom edge was straight when lashed to the loom bar.

Once weaving was completed, the remaining warp beyond the mouth was cut, the end of each yarn turned back and diagonally interwoven with adjacent yarns. When pulled tight and trimmed off, a stable, strong edge was created to be hidden by an embroidered yarn binding.

The second bag (Figs. 3 and 4; TM 91.148) was made in a totally different manner. It was woven in one piece, wide at the middle, narrow at the ends, then folded at the middle and sewn up the sides.

Along the bottom edge, across the center of the warp, is what appears to be a heavy cord. Actually this is a twined element of two three-strand cotton cords encircling two warp yarns within each twining twist. If inserted before weaving, it may have been either lashed to a rod to hold the warp firmly expanded or the ends may have been tied to a frame to achieve the same result. As the weft is so evenly inserted between the twined element and the heading cords, one cannot state with certainty where weaving started and ended. Through the areas with weft stripes at the top of the bag the warps are woven as pairs; in the balance of the fabric they are handled singly, a feature that in part influenced the outline of the side selvage.

From the condition of the specimen, with a crudely-darned hole on one side, with irregular sideseam sewing of differing quality, it was obviously a well used, perhaps old bag when placed in the tomb. The feather corner tassels are, in contrast, in such excellent condition that they must have been added or renewed shortly before burial.

The third bag (Fig. 5; TM 91.517) was seemingly never used. It is made of two separately created fabrics very casually stitched or basted together. The two halves match in their overall dimensions, outline, colors, and motif, but side selvages differ by over a centimeter in one area. This may have discouraged the maker from properly finishing the sewing; at least it was judged adequate as a tomb offering.

The animal figure motif is similar to the one on the Bullowa bag and again is repeated on both sides with a reverse of major color distribution. Construction is similar in that the shape was in part achieved by fanning or expanding the warp between the loom bars; also in that, at irregular points, adjacent warps were paired, woven together a short distance, then one was cut. It differs in that the bag is formed of two woven fabrics each warped up separately with separate heading cords. In one piece there were 216 passages of the warp yarn reduced to 154 ends at the conclusion of weaving. In the other, 222 are reduced to 126. Above the line where the field of the motif terminated, the remaining warps were paired as in the other Textile Museum specimen. The work was then terminated

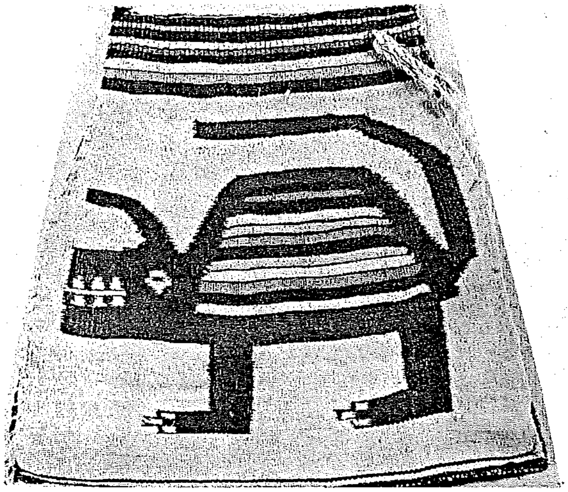

Fig. 5 *Tapestry bag, woven in two separate pieces. Length, 33.2 cm. Bottom width, 36.5 cm. Top width, 20.7 cm. Warp: /\/ cotton. Weft: /\ alpaca? Count: 16 x 68 per inch. Colors: yellow, blue, rose, gold, dark brown. Textile Museum 91.517*

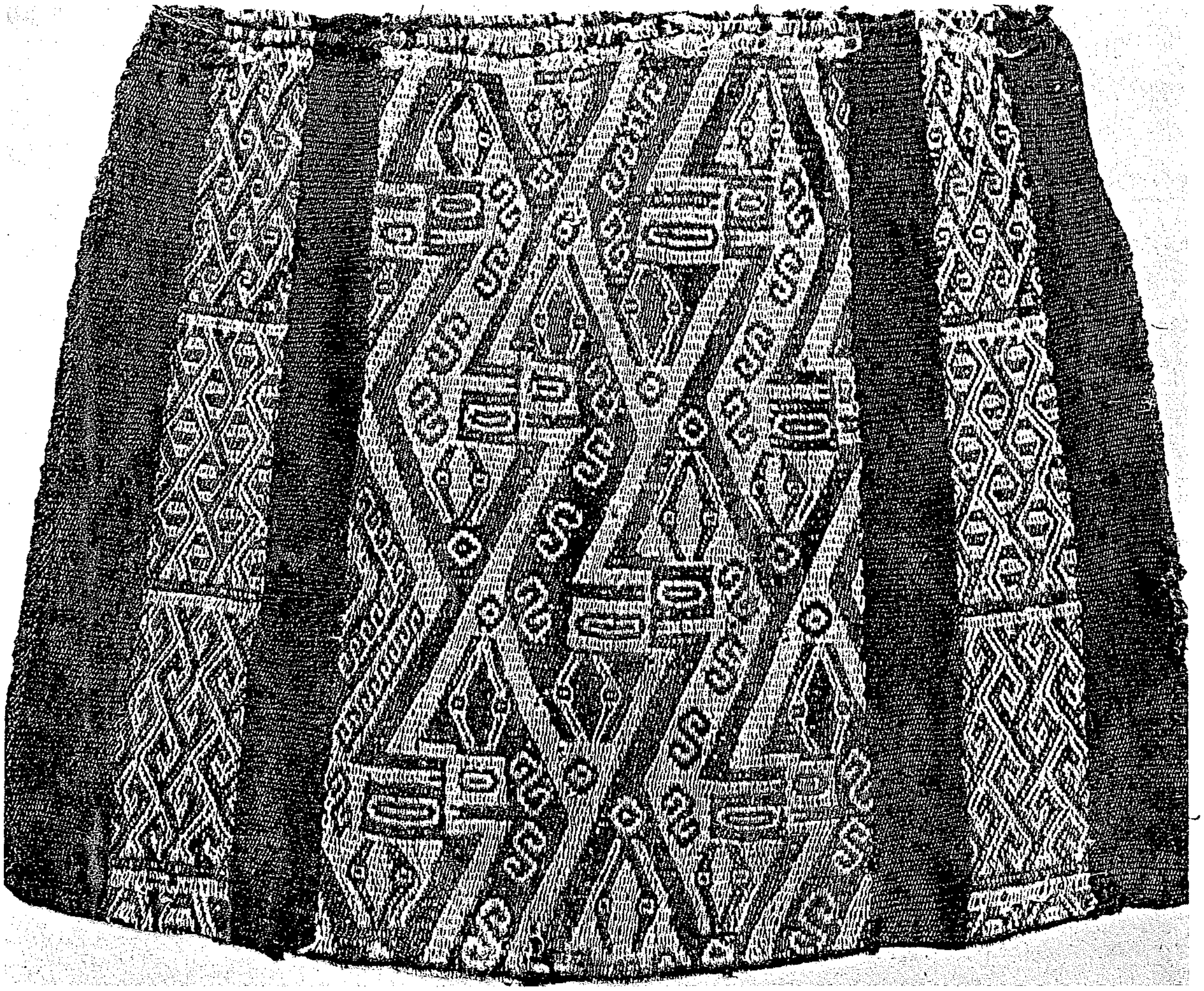

Fig. 6 *Warp pattern coca bag, a single complete loom product folded at middle and seamed up sides. Weaving started against heading at ends and terminated at center along bag bottom. Pattern identical both sides. Length, 22 cm. Bottom width, 29 cm. Top width, 22 cm. Warp: /\ wool, red, purple, yellow, brown. Weft: /\ brown wool. Arica, Chile, associated with Arica I pottery. American Museum of Natural History 41.1/5357*

by cutting the warp, turning each pair back along an adjacent pair, then laying in weft, probably with a needle. Once pulled tight and trimmed, a firm, strong edge was formed.

As previously noted, the differences between these three specimens suggest an experimental stage of development for such products. Shaping by expanding the warp between the loom bars dates back in the same region probably several centuries B. C. A feather-covered cape in the collection of the Textile Museum, found in association with Ica valley resin-painted ceramics was so formed. Later many bags with expanded bases (Fig. 6) were made by spreading the midsection of the warp as in Item TM 91.148. The practice has survived until the present among the Machiguenga Indians of northeastern Peru (Fig. 7) and possibly elsewhere although to date no one has recorded the procedures used.

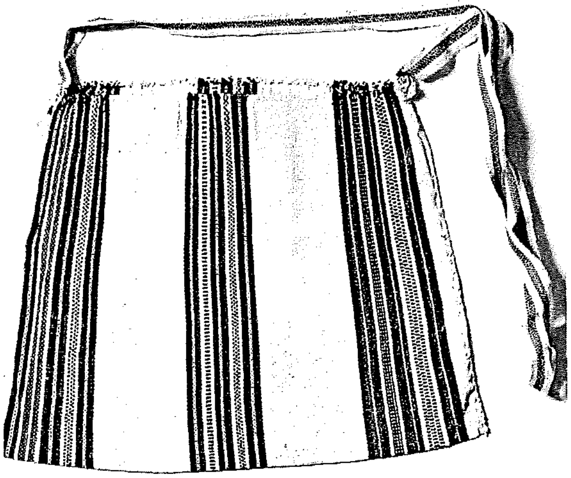

Fig. 7 *Warp stripe coca bag, a single loom product folded at middle and seamed up sides. Length, 23 cm. Bottom width, 30.5 cm. Top width, 21.3 cm. Warp: / white, black, ∧ brown, cotton. Weft: / cotton. Machiguenga Indians, Peru. A.M.N.H. 40.1/2302*

DR. JUNIUS B. BIRD, Curator of South American Archaeology at the American Museum of Natural History and Trustee of the Textile Museum, is already familiar to our readers as the author of the museum's Catalogue Raisonné, "Paracas Fabrics and Nazca Needlework" (with technical analysis by Louisa Bellinger), published in 1954. Dr. Bird is foremost among archaeologists working in the Central Andean area in his utilization of ancient textiles as archaeological documents. In 1941 while excavating one of the earliest habitation sites on the North Chilean Coast, he recovered the first fully documented stratigraphic series of ancient textiles to be obtained in South America. Later, he carried out extensive excavations on Peru's North Coast at a pre-ceramic site called Huaca Prieta, near the mouth of the Chicama Valley, where he again encountered fabrics. Although his final detailed report on this important work is still in preparation, preliminary publications of his findings have greatly contributed to our understanding of the earliest textile achievements of Ancient America. Many of the Huaca Prieta textiles dating from 2500 to 2000 B.C. bear elaborate designs and as such are the earliest known decorated textiles from Peru. Dr. Bird was able to reconstruct these patterns by carefully charting the warp movements in the twined construction of the fragments of cloth he recovered. His ingenuity, patience and thoroughness in the analysis of archaeological materials have set a new high standard in the profession.

Dr. Bird is the author of many articles on early textiles and techniques, and other archaeological subjects. He was co-author with Wendell C. Bennett of "Andean Culture History," a handbook of the American Museum of Natural History, published in 1949, and revised by Dr. Bird in 1960. The individuals he has assisted and encouraged professionally are legion. Among those greatly in his debt are the Textile Museum's Director, Alan R. Sawyer; its Curator of Western Hemisphere Textiles, Miss Mary Elizabeth King, and Miss Irene Emery, Curator of Technical Studies, all of whom have greatly benefited from his collaboration and advice.